Preconception Care

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Consult

- Natasha
  - 34yo
  - Presents for cervical screening, last pap smear 2017

  - PMH
    - asthma
    - impaired glucose tolerance
    - depression

Medical history

- TOP age 22.
- Currently using OCP, commenced age 20. Regular withdrawal bleed, no PCB.
- Married. Thinking about TTC in a few months
- Medications:
  - Sertraline 75mg daily
  - Ventolin PRN, Seretide 250/50 BD
- NKDA
- Non-smoker, drinks 1 – 3 glasses of wine 2 – 3 x weekly
- Family history – Father - diabetes. Maternal aunt – breast cancer

Examination

- Weight/BMI – Weight 83, height 163cm, BMI 31.2
- HSDNM, chest clear.
- Speculum exam NAD – CST performed, bimanual examination normal.
- Breast examination normal.

Expectations after contraception

- Many women will conceive in first month.
- 80% of couples will conceive within one year.
- Timing of intercourse – every second day around ovulation

Lifestyle advice – diet and exercise

- Advice regarding a healthy, balanced diet
- Information regarding food safety in pregnancy
- 150 – 300 minutes of exercise per week or 30 minutes on most days
- Mix of aerobic and strength
- Avoid exercising in high temperatures or humidity
- Avoid activities which have a high risk of falling or trauma

Lifestyle advice - Weight

- Ideal aim is for healthy BMI prior to pregnancy
  - However, may be more appropriate to set realistic goals
  - 5 - 10% reduction in pre pregnancy weight can decrease stillbirth risk by 10%
- With increased maternal weight, increased risks of:
  - IUGR
  - Gestational diabetes
  - Preterm birth
  - Caesarean section
  - Children more likely to be overweight and develop cardiovascular and metabolic disease

Lifestyle advice - alcohol

- There is no safe level of alcohol consumption established in pregnancy
- Women who are trying to conceive or who are pregnant should be advised not drinking is the safest option
  - Risks of high level or sustained alcohol consumption include
    - Miscarriage, still birth, premature birth
    - Withdrawal symptoms after birth
    - FASD/FAS
  - The risk to the fetus is likely to be low if small amounts of alcohol are consumed before a woman knows she is pregnant

Lifestyle advice - smoking

- Ideally quit smoking prior to pregnancy, however stopping at any time will reduce the risk to the baby
  - Counselling, hypnotherapy, Quitline
  - Nicotine replacement therapy not well studied, but likely to be safer than smoking
- Risks include
  - Reduces fertility of both men and women
  - Major risks are of IUGR and preterm birth
  - Increased risk of SIDS
  - Increased risk of childhood respiratory infections, asthma and obesity
- Vaping

Supplements

- Folate
  - 72% reduction in development of NTD
  - At least 0.5mg daily
  - 5mg daily for higher risk of NTD:
    - anti-convulsant medications
    - pre pregnancy diabetes
    - Previous child or family history of NTD
    - BMI >35

Supplements

- Iodine
  - Fetal brain and CNS development
  - 150mcg daily

- Omega 3 fatty acids
  - Possible improved neurodevelopment outcomes
  - Possible reduction in preterm birth
  - Suggest supplementation for women who have low dietary intake

Supplements

- Vitamin D
  - Reduction in risk of SGA babies and impaired fetal development
  - Adequate vitamin D >50nmol/L.
  - Approx. 25% of Australian women are vitamin D deficient, screening using risk factors will miss half
  - Advise all women to take 400IU vitamin D
  - Or 1000IU if vit D level 30 – 50
  - Or 2000IU if vit D <30

Supplements

- Calcium
  - Prevention of hypertensive disorders of pregnancy and preterm labour
  - 1000mg per day if dietary intake is insufficient

- Vitamin B12
  - Vegetarian or vegan diet
  - Infant neurological sequelae
  - RDI 2.6microgram/day in pregnancy

Screening

- Cervical screening test
- Breast examination
- STI screening

- Dental check up

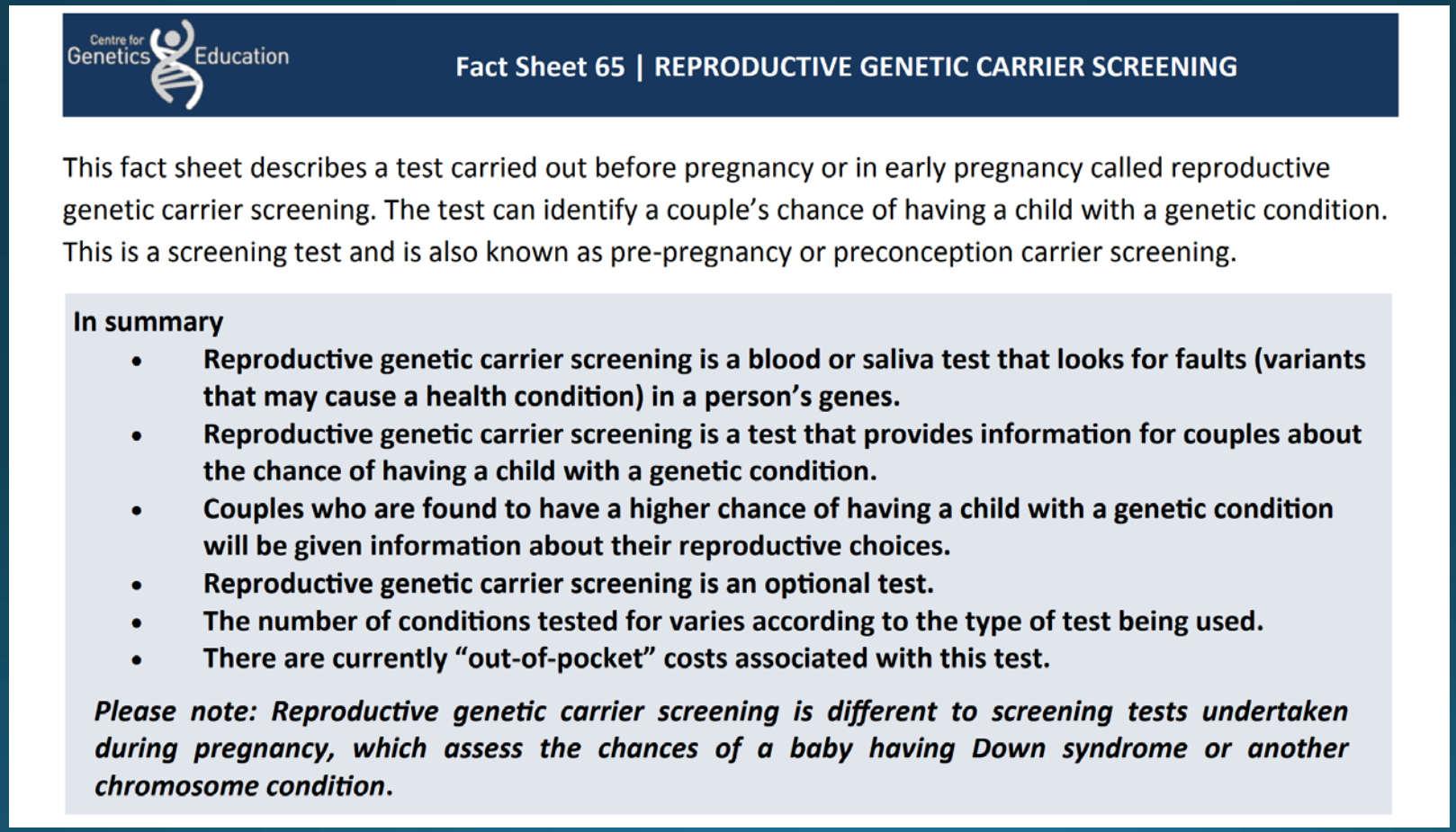
Antenatal Screening

- Blood group and antibodies
- FBC
- Ferritin
- Rubella immunity, varicella immunity
- Hep B/C/HIV/Syphilis
- TSH
- Vit D
- Thalassaemia

Reproductive Carrier Screening

- Genetic carrier screening
  - All women/couples should be offered carrier screening
  - If high risk of chromosomal or genetic disorder (e.g. family history, ethnic background, consanguinity) → genetic counselling
  - Low risk women/couples → carrier screening

Reproductive genetic carrier screening



Centre for Genetics Education

Fact Sheet 65 | REPRODUCTIVE GENETIC CARRIER SCREENING

This fact sheet describes a test carried out before pregnancy or in early pregnancy called reproductive genetic carrier screening. The test can identify a couple's chance of having a child with a genetic condition. This is a screening test and is also known as pre-pregnancy or preconception carrier screening.

In summary

- **Reproductive genetic carrier screening is a blood or saliva test that looks for faults (variants that may cause a health condition) in a person's genes.**
- **Reproductive genetic carrier screening is a test that provides information for couples about the chance of having a child with a genetic condition.**
- **Couples who are found to have a higher chance of having a child with a genetic condition will be given information about their reproductive choices.**
- **Reproductive genetic carrier screening is an optional test.**
- **The number of conditions tested for varies according to the type of test being used.**
- **There are currently "out-of-pocket" costs associated with this test.**

Please note: Reproductive genetic carrier screening is different to screening tests undertaken during pregnancy, which assess the chances of a baby having Down syndrome or another chromosome condition.

Vaccinations

- MMR
- Varicella
- Influenza vaccination
- Covid vaccination
- Hepatitis B

Prior Pregnancy History

- Recurrent miscarriage
- Preterm birth
- Pregnancy complications e.g. gestational diabetes, pre-eclampsia
- Stillbirth
- Congenital abnormalities

Medication Review

- Over the counter medications
- Vitamins/supplements
- PRN medications
- Prescribed medications

Psychosocial review

- Screen for domestic violence
- Screen for mental health issues/risk factors

- Planning for pregnancy with pre-existing mental health issues
  - Pregnancy should ideally be at a time of wellbeing with no recent relapse
  - Pregnancy and postpartum relapses are more common if there has been recent significant illness, e.g. resulting in admission in last 2 years
  - Ensure engagement with mental health professionals, consider referral to a perinatal psychiatrist
  - Psychoeducation/structured psychological interventions are recommended

Mental Health - medications

- Some psychotropic medications reduce fertility (e.g. risperidone, mirtazapine) through increased levels of prolactin
- The risk and benefits of medications needs to be weighed against the risk of no treatment
- Abrupt cessation may lead to risks associated with inadequately treated mental illness including poor engagement in antenatal care, inadequate nutrition, increased alcohol or illicit drug intake and smoking
- A single medication used at a higher dose is preferable to multiple lower dose medications

Antidepressants

- Most data available for SSRIs, generally preferred
- TCAs also appear safe
- Many studies show only small increased risks or are inconclusive
  - SSRIs do not appear to increase risk of birth defects
  - Possible small risk of shorter gestational age
  - Withdrawal effects limited to first 14 days of life
  - Increased risk of persistent pulmonary hypertension of newborn

Medical conditions – diabetes

- Women with impaired glucose tolerance should be managed as gestational diabetes from conception and do not need to undergo OGTT
- Diabetes checklist to provide advice and education
  - Healthy eating/glycaemic index/carbohydrate content
  - Folic acid 5mg daily 3 months prior to conception
  - HbA1c target =< 6.5% without hypoglycaemia – contraception until glycaemia optimised
  - Sick day management, hypoglycaemia management
  - Review medications

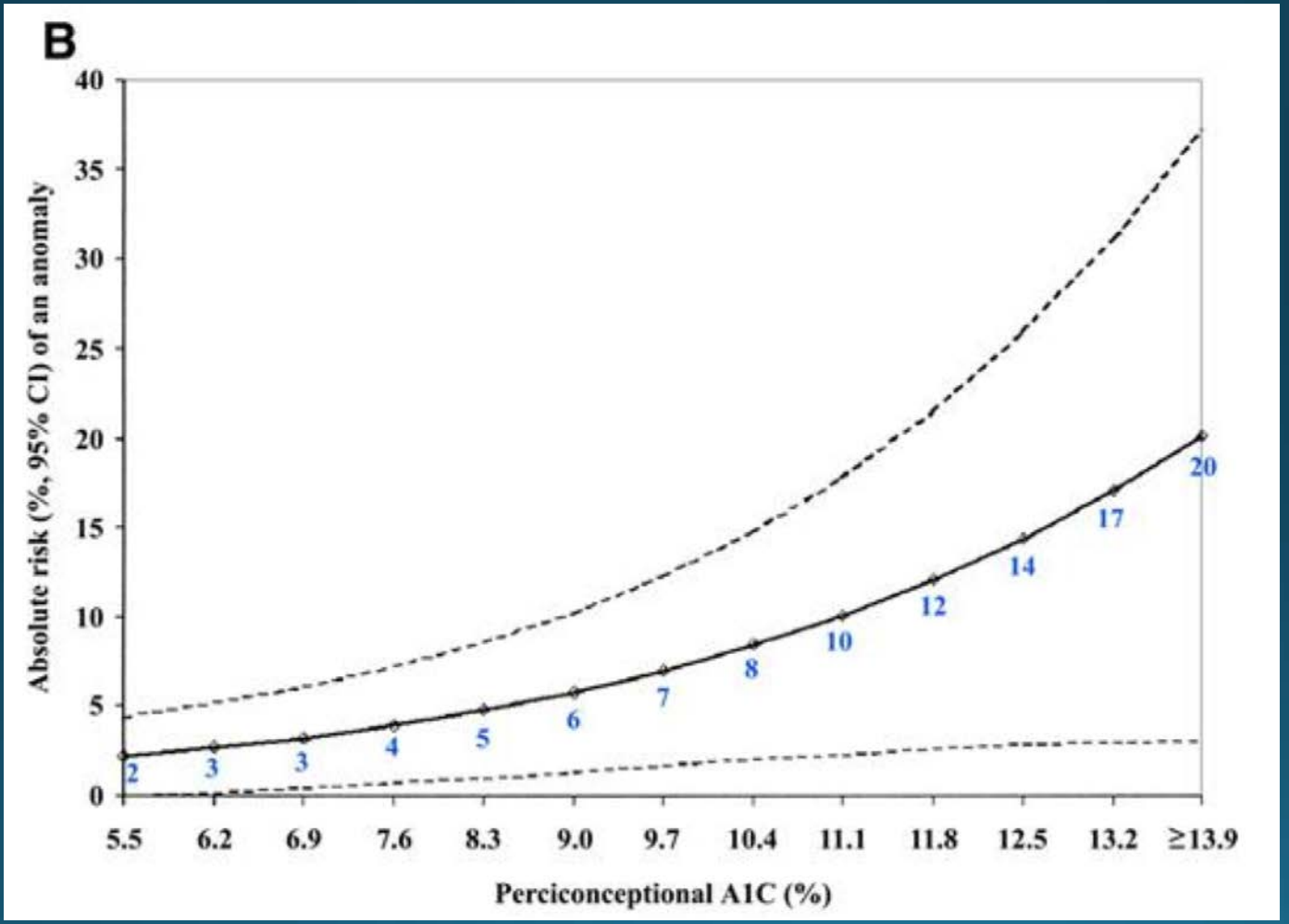
Medical conditions – diabetes

- Screen for co-morbidities and complications
    - Blood pressure
    - Coronary artery disease
    - Retinal disease
    - Kidney disease
    - Autonomic neuropathy
    - Diabetic foot disease
    - Thyroid disease
    - Coeliac disease
    - Dental health

Medical conditions – diabetes

- Baseline investigations
  - HbA1c (repeat every 2 – 3 months)
  - Lipids
  - TSH, TPO antibodies
  - Coeliac autoantibodies
  - B12, RBC folate
  - Creatinine/eGFR
  - Spot urine albumin/creatinine ratio

Medical conditions - diabetes



Diabetes Care. 2007;30(7):1920-1925. doi:10.2337/dc07-0278

Medical conditions - asthma

- Almost 1/3 of women with discontinue or reduce asthma preventing drugs and may overcompensate with short acting relievers.
- Risks of poorly controlled asthma include increased risk of preterm birth, low birth weight, pre-eclampsia, caesarean delivery
- 60% of women will have a deterioration in asthma, 20% will improve, 20% will have no change.

Medical conditions - asthma

- Assess severity of asthma
- Advise women to keep taking her preventer through pregnancy if one has been prescribed
- Consider replacing preventer with budesonide pre pregnancy to see if asthma control remains stable.
- If already pregnant, if asthma is well controlled on combination corticosteroid/long-acting beta2 agonist, advise to continue

Medical conditions - asthma

- Salbutamol, terbutaline – safe (category A)
- Long acting beta agonists e.g. salmeterol – limited studies, no significant increase in harm, maternal concentrations very low or undetectable – discourage starting in first trimester, but do not withdraw
- Inhaled corticosteroids – decreased risk of low birthweight. Budesonide category A, fluticasone, ciclesonide etc. B3 – ideally switch prior to pregnancy
- Cromones – safe (sodium cromoglycate category A, Nedocromil sodium (Category B1)

Medical conditions - asthma

- Montelukast – ideally avoid in pregnancy, possible increased risk of adverse events
- Oral/IV corticosteroids
  - - Reports of increased risk of cleft lip/palate with use prior to 10 weeks, however these small poorly controlled studies and recent evidence suggests minimal increased risk. Benefits for use in severe asthma outweigh risks.

Medical condition - summary

- Think about the effect of the pregnancy on the medical condition
- Think about the effect of the medical condition on the pregnancy
- What can be done to optimize these effects prior to pregnancy
- Review and rationalize medications

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